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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,753	01/28/2000	Clifford A McCarthy	10992091	2627

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EXAMINER

TANG, KENNETH

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/493,753

Applicant(s)

MCCARTHY ET AL.

Examiner

Kenneth Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/28/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This non-final rejection is in response to the Remarks on 6/25/04. New grounds of rejections were made based on the submission of the Information Disclosure Statement in 4/28/05.
2. Claims 1-20 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-2, 5-13, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable by Steere et al. (hereinafter Steere) (“A Feedback-driven Proportion Allocator for Real-Rate Scheduling”) in view of Eilert et al. (hereinafter Eilert).**

4. As to claims 1, 12, 18, Steere teaches a method, system and program for managing allocation (adaptive scheduler) of computer resources among applications operating on a computer, based upon at least one user-defined goal for at least one application and application performance information (by specifying their desired proportion and/or period) related to the one application (*see Abstract*), the system comprising:

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- a calculator that determines an allocation request value using a proportional factor, an integral factor, and a derivative factor, (PID) wherein the factors are calculated from the at least one user-defined goal and the performance information (proportion and period) (*page 3, Section 3.1, page 6, 2nd column*); and
- an arbiter (controller monitors and makes the adjustment) that is operative to adjust the allocation request value into an adjusted allocation value when the allocation request value and allocation request values associated with other applications exceeds a predetermined value (*page 3, Section 3*).

Eilert teaches managing a workload distributed across data processing system according to a plurality of end-user oriented goals (*col. 1, lines 59-67 through col. 2, lines 1-16, etc.*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Eilert with Steere because this would allow goals to be achieved according to the user (*col. 1, lines 59-67 through col. 2, lines 1-16, etc.*).

5. As to claims 2 and 13, it is rejected for the same reason as in claim 1. In addition, Steere teaches the PID factors having a proportional constant and a proportional variable (*page 6, 2nd column through page 7, 1st column*).

6. As to claim 5, Steere teaches wherein a number format for each of the at least one user-defined goal, the performance information, and the allocation request value is selected from the group consisting of: a floating point number, and an integer number (*page 3, Section 3.1*).

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7. As to claim 6, Steere fails to explicitly teach a rounder that uses cumulative rounding to adjust the floating point allocation request value into an integer number. However, it is well known in the art and obvious that the values can be rounded cumulatively. This standard is used because it allows for simplification.

8. As to claim 7, Steere teaches wherein: the performance information is generated by a performance monitor that monitors a characteristic of the application associated with the goal (*page 3, Section 3 and Section 3.1*).

9. As to claim 8, Steere teaches wherein: the allocation request value is used by a process resource manager to allocate computer processing resources among the applications operating on the computer (*page 3, Section 3 and Section 3.1*).

10. As to claim 9, Steere teaches wherein the one application is one of a plurality of applications, and each application of the plurality has an associated user-selectable priority and an allocation request value, wherein: the arbiter determines whether each application of the plurality of applications having the same priority can be allocated resources to equal its associated allocation request value, if so, then the arbiter forms the adjusted allocation request value for each application by equaling the adjusted allocation request value to the allocation request value, and if not, then the arbiter determines whether each application of the plurality of applications having the same priority can be allocated resources to equal a target value (*page 3, Section 3 and Section 3.1*).

11. As to claim 10, Steere teaches wherein: the target value is selected by the arbiter from the lowest of a previously allocated request value, which has not been previously selected as a target value, and an allocation request value of an application of the plurality of applications having the same priority, which has not been previously selected as a target value (*page 3, Section 3 and Section 3.1*).

12. As to claim 11, Steere teaches wherein: the arbiter forms the adjusted allocation request value for each application by equaling the adjusted allocation request value to the target value, if the arbiter determines that each application of the plurality of applications having the same priority can be allocated resources to equal the target value (*page 3, Section 3 and Section 3.1*).

13. As to claims 16 and 19, they are rejected for the same reasons as stated in the rejections of claims 9 and 10.

14. As to claim 17 and 20, they are rejected for the same reasons as stated in the rejections of claim 9.

Allowable Subject Matter

15. Claims 3-4 and 14-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

16. Applicant's arguments have been fully considered but are now moot in view of the new grounds of rejections.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 4/28/05 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

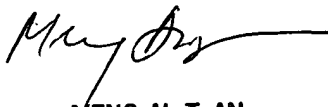
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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
9/30/05


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SUPERVISORY PATENT EXAMINER
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